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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/605,735	06/29/2000	Do-hyoung Kim	Q59911	8093

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2100 Pennsylvania Avenue NW  
Washington, DC 20037-3202

EXAMINER
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DINH, JOSEPH

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 11/10/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/605,735

Applicant(s)

KIM ET AL.

Examiner

Joseph H. dinh

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 November 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4 and 8-10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Bell U.S. Patent No. 6011781. Bell teaches the following with respect to the claims. References to Bell appear in parenthesis.

1. A connection management method for connecting a digital device, which can be connected to a plurality of digital devices through a digital interface (Bell, Fig. 1B), to another digital device, the connection management method comprising the steps of:

(a) detecting a point-to-point connection being established to another digital device. According to Bell (Fig. 2), when the network is considered to be series of point-to-point network, there is a point-to-point link from one node to the other nodes on the network. He also discloses that the node first determines if point-to-point communication has been established between the node and other nodes in the network (Bell, Fig.3, step 304)

(b) checking whether or not the digital device, which establishes the point-to-point connection in the step (a), is the other digital device to be connected by the point-to-point connection. In Fig.4, Bell teaches that the node first determines each of the other nodes is present on the network. Then the node establishes point-to-point communication between the node and each of the other nodes determined to

be present on the network.(Bell, Fig. 4, step 404-408, column 4, line 48-53); and  
(c) establishing another point-to-point connection to the other digital device, when  
the result of step (b) indicates that the digital device, which establishes the  
point-to-point connection, is not the other digital device to be connected by the  
point-to-point connection. Bell teaches that the current  
node then determines whether it is the last node on the network to establish  
communication with the other nodes. If not, the current node generates a handoff  
signal which is received by another node on the network. That other node is  
designated as the current node and the loop repeats beginning at step 608 (Bell,  
Fig.6, step 612-616, column 5, line 24-30).

2. (Amended) The connection management method of claim 1, wherein in the step  
(c), the other point-to-point connection is overlaid with respect to the point-to-point  
connection originally established,  
and managed by the digital device which is connected to the other digital device. In  
Fig. 6, step 612, column 5, line 24-30, Bell teaches that the current node then  
determines whether it is the last node on the network to establish communication  
with the other nodes. If not, the current node generates a handoff  
signal which is received by another node on the network. That other node is  
designated as the current node and the loop repeats beginning at step 608.

3. (Amended) The connection management method of claim 2, wherein the other  
point-to-point connection, which is established in the step (c), is overlaid  
with respect to the original point-to-point connection by both of, or any one of the

two digital devices, which are connected by the originally established point-to-point connection. Bell teaches if the current node is not the last node, then it generates a handoff signal which is received by another node on the network and the loop repeats beginning at step 608 (Bell, Fig. 6, step 612-624, column 5, line 26-30).

4. The connection management method of claim 1, further comprising:

(d) establishing, via the other digital device, yet another point-to-point connection between the digital devices originally being connected, when the result of the step (b) indicates that the digital device, which establishes the point-to-point connection in step (a), is not the other digital device to be connected by the point-to-point connection. In Fig.6, step 608, column 5, line 20-31, Bell discloses the point-to-point communication between the current node and all of the other nodes on an individual basis.

8. A connection management system for connecting digital devices to each other, comprising:

a digital interface bus(Bell, Fig. 2, a bus communication from RN1 to RNn);

a first digital device(RN1);

a second digital device (RN2);

and a third digital device(RN3);

wherein the first digital device is operable to establish and manage a first point-to-point connection, via the digital interface bus (Bell, Fig. 1B), between other digital devices.

According to Bell, when the network is considered to be series of point-to-point

network, there is a point-to-point link from:

RN1 to RN2  
RN1 to RN3  
RN1 to RNn  
RN2 to RN1  
RN2 to RN3  
RN2 to RNn  
RN3 to RN1  
RN3 to RN2  
RN3 to RNn (Bell, Fig. 2)

Also, Bell teaches that each node on the network determines whether or not it should be the first node to establish communication. The node that is determined to be the first node is designated as the current node. The current node then enters a loop wherein communication is established between the current node and all of the other nodes on the network on an individual basis (Bell, Fig. 6, step 604-608, column 5, line 13-23). Further Bell shows that the node first determines if point-to-point communication has been established between the node and other nodes on the network (Bell, Fig. 3, step 304, column 4, line 31-34). And further, Bell discloses that the node first determines each of the other nodes is present on the network. Then the node establishes point-to-point communication between the node and each of the other nodes determined to be present on the network (Bell, Fig. 4, step 404-408, column 4, line 48-53)

and wherein the second digital device is operable to detect whether the first point-to-point connection is being established with the second digital device by the first digital device, and further operable to check whether the first digital device is to be connected to the second digital

device by the first point-to-point connection, and further operable to establish a second point-to-point connection between the second digital device and the third digital device, when the first point-to-point connection is being established between the second digital device and the third digital device and the second digital device determines that the first digital device is not to be connected to the second digital device by the first point-to-point connection.

9. The connection management system of claim 8, wherein the second digital device is further operable to overlay the second point-to-point connection, with respect to the first point-to-point connection, on the digital interface bus (Bell, Fig. 1B), and manage the second point-to-point connection. Bell discloses each node first determines whether each of the other nodes is present on the network. Then the node establishes point-to-point communication between the node and each of the other nodes on the network (Bell, Fig. 4, step 404-408, column 4, line 46-53).

10. The connection management system of claim 8, wherein the third digital device is operable to check whether the first digital device is to be connected to the third digital device by the first point-to-point connection, Bell teaches that the node first determines if point-to-point communication has been established between the node and other nodes in the network (Bell, Fig. 3, step 304, column 4, line 31-34), and further the node then establishes point-to-point communication between the node and each of the other nodes, determined to be present on the network ( Bell, Fig. 4, step 404-408, column 4, line 48-53) and further operable to establish a third point-to-point connection between the third

digital device and the second digital device, when the first point-to-point connection is being established between the second digital device and the third digital device and the third digital device determines that the first digital device is not to be connected to the third digital device by the first point-to-point connection

2. Claim 11 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Zou U.S. Patent No. 6160796. Zou discloses that within the network, several consumer electronics products, e.g., VCR, PCs, DVD, etc., can be coupled to communicate together via a standard bus ,e.g., IEEE 1394 serial communication bus. This allows devices of the network to control one another and obtain information regarding one another (Zou, column 2, line 61-68).

11. The connection management system of claim 8, wherein the digital interface bus is an IEEE 1394 standard serial bus.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 5-7 and are rejected under 35 U.S.C. 103(a) as being clearly unpatentable over Zou U.S. Patent No. 6160796 in view of Bell U.S. Patent No. 6011781. Zou(column 2, line 60-68) discloses that within the network, several consumer electronics products, e.g., television, VCR, PCs, set-top box, DVD players, etc., can be



coupled to communicate via a standard bus, e.g., IEEE 1394 serial communication bus.

This allows devices of the network to control one another and obtain information regarding one another, and Bell discloses that when the network is considered to be series of point-to-point networks, there is a point-to-point link from one node to the other nodes on the network (Bell, Fig.2, column 3, line 63-67). Bell and Zou differ from the claimed invention

because they do not explicitly show the comparison and the disconnection between two nodes before establishing point-to-point communication. Therefore, it would have been obvious to one having ordinary skill in the art to modify the net of Bell by using the standard bus IEEE 1394 and teaching the comparison and the disconnection between two nodes before establishing point-to-point communication so that the network becomes less expensive, more efficient and more reliable.

5. A connection management method for connecting a first digital device, which can be connected to a plurality of digital devices through a digital interface(Zou, Fig.1B) to a second digital device, the connection management method comprising:

(a) detecting, by the first digital device, a first point-to-point connection being established with the first digital device, wherein the first point-to-point connection is established via a connection-establishing digital device; in Fig. 3, step 304, column 4, line 29-34, Bell teaches that the node first determines if point-to-point communication has been established between the node and the other nodes in the network.

(b) checking whether the connection-establishing digital device is the second digital

device to be connected to the first digital device by the first point-to-point connection. Bell discloses that each node on the network determines whether or not it should be the first node to establish communication. The node that is determined to be the first node is designated as current node, then it enters a loop wherein communication is established between the current node and all of the other nodes on the network (Bell, Fig. 6, step 604-608, column 5, line 24-26); and

(c) establishing, via the first digital device, a second point-to-point connection to the second digital device, when the result of the step (b) indicates that the connection-establishing digital device is not the second digital device to be connected to the first digital device by the first point-to-point connection.

According to Bell, the current node determines whether it is the last node on the network to establish communication with other nodes (Bell, Fig. 6, step 612, column 5, line 24-26). If not, the current node generates a handoff signal which is received by another node. That other node is then designated as the current node and the loop repeats beginning at step 608 (Bell, Fig. 6, step 608, column 5, line 26-30) disclose the comparison between two nodes on the network.

6. The connection management method of claim 5, wherein in the step (c), the second point-to-point connection is overlaid with respect to the first point-to-point connection and managed by the first digital device. According to Zou, if a client, e.g. a node, wants to establish a connection between two devices, it calls to establish in external connection of one of the two DCMs (device control module) that represent those devices. It passes the module ID of the other device's DCM as a parameter.

The DCM that was called then calls the Stream Manager(SM) to assist with making the connection. The SM analyzes the source and destination ID, and find that they are in different nodes. The SM asks the CMM (Communications Media Manager) of the source node for the topology map for its network. The SM analyzes the topology map to find the destination node (Zou, Fig.7A, step 415-445, column 19, line 17-40). The SM analyzes the connection paths to find the best route. This is done for entire path from source to destination, including intermediate or cross-network boundaries. All necessary connections are made in the case of dynamic buses such as 1394 (Zou, column 19, line 43-47)

7. The connection management method of claim 5, further comprising:

(d) checking, by the second digital device, whether the connection-establishing digital device is the digital device to be connected to the second digital device by the first point-to-point connection. According to Bell, the current node determines whether it is the last node on the network to establish communication with other nodes (Bell, Fig.6, step 612, column 5, line 24-26)

(e) establishing, via the second digital device, a third point-to-point connection to the first digital device, when the result of the step (d) indicates that the connection-establishing digital device is not the digital device to be connected to the second digital device by the first point-to-point connection. According to Zou, if a client, e.g. a node, wants to establish a connection between two devices, it calls to establish in external connection of one of the two DCMs (device control module) that represent those devices. It passes the module ID of the other device's DCM as

a parameter. The DCM that was called then calls the Stream Manager(SM) to assist with making the connection. The SM analyzes the source and destination ID, and find that they are in different nodes. The SM asks the CMM (communications media Manager) of the source node for the topology map for its network. The SM analyzes the topology map to find the destination node (Zou, Fig.7A, step 415-445, column 19, line 17-40). The SM analyzes the connection paths to find the best route. This is done for entire path from source to destination, including intermediate or cross-network boundaries. All necessary connections are made in the case of dynamic buses such as 1394 ( Zou, column 19, line 43-47)

### ***Conclusion***

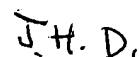
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph H. Dinh whose telephone number is 703-305-8964. The examiner can normally be reached on Monday-Friday, 8:30 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.



MELVIN MARCELO  
PRIMARY EXAMINER



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